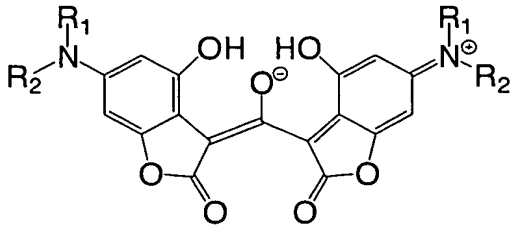
What is claimed is:

1. An optical switching device comprising a substrate and at least an organic film as a light control part formed on the substrate,

wherein optical switching is performed by applying signal light and control light to the organic film, the wavelengths of the signal light and the control light being set in a region in the vicinity of resonance on the longer wavelength side in the absorption spectrum of the organic film; and by changing a real part or real and imaginary parts of the refractive index of the light control part by using the control light, to thereby cause a phase difference in the signal light.

2. The optical switching device of claim 1, wherein the organic film comprises a compound represented by the following formula (I):

Formula (I)



wherein R_1 and R_2 each independently represent a straight-chain alkyl group or a branched alkyl group.

3. The optical switching device of claim 2, wherein the optical switching is performed by setting the wavelengths of the signal light and the control light in a wavelength region which does not actually excite an electron in the compound represented by formula (I) contained in the organic film.

4. The optical switching device of claim 2, wherein center wavelengths of the signal light and the control light are set to 1480 nm or more.

5. The optical switching device of claim 1, wherein the optical switching is performed by arranging a pair of polarizers, whose polarization directions are orthogonal to each other, on both sides of the organic film in the optical path of the signal light, when the refractive index of the light control part is changed by the control light, thereby causing a phase difference in the signal light.

6. The optical switching device of claim 1, wherein the signal light and the control light are optical pulses having a time width in a range of 10^{-12} to 10^{-13} seconds.

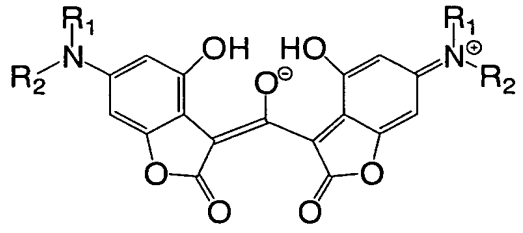
7. The optical switching device of claim 1, wherein the light control part is a multilayered film comprising the organic film and a dielectric film.

8. The optical switching device of claim 7, wherein a difference between a refractive index of the dielectric film and a refractive index of the organic film is within a range of 0 to 0.5.

9. The optical switching device of claim 7, wherein a difference between a refractive index of the dielectric film and a refractive index of the organic film is within a range of 0.5 to 1.8.

10. The optical switching device of claim 7, wherein the organic film comprises a compound represented by the following formula (I), and the dielectric film is at least one of an organic dielectric film and an inorganic dielectric film:

Formula (I)



wherein R_1 and R_2 each independently represent a straight-chain

alkyl group or a branched alkyl group.

11. The optical switching device of claim 10, wherein the dielectric film comprises at least one inorganic dielectric film selected from a GeO film, a MgF_2 film, a CaF_2 film, and a SiO film.

12. The optical switching device of claim 9, wherein a center wavelength of the signal light and/or the control light is set in the vicinity of a wavelength region where reflectance is minimized and/or transmittance is maximized due to an interference effect deriving from the multilayered film.

13. The optical switching device of claim 7, wherein the dielectric film is an inorganic dielectric film formed by vacuum deposition.

14. The optical switching device of claim 7, wherein the dielectric film is an organic dielectric film formed by spin coating of a solution containing an organic solvent and organic polymer material dissolved therein.

15. The optical switching device of claim 2, wherein the organic film is formed by spin coating of a solution containing an organic solvent and the compound represented by formula (I) dissolved therein.

16. The optical switching device of claim 10, wherein the organic film is formed by spin coating of a solution containing an organic solvent and the compound represented by formula (I) dissolved therein.

17. The optical switching device of claim 1, wherein the signal light and the control light are condensed to the light control part by a light-focusing means.

18. The optical switching device of claim 17, wherein a diameter of a focal point is in a range of 3 to 10 μm when the signal light and the control light are condensed to the light control part.

19. The optical switching device of claim 1, wherein the light control part is divided into independent plural sections where light control is performed in parallel.

20. The optical switching device of claim 1, wherein the substrate is a flexible film.

21. An optical device comprising the optical switching device of claim 20 which is disposed in contact with at least one of an optical input part and an optical output part of an optical element.

22. An optical device comprising at least an organic film as a light control part formed at at least one of an optical input part and an optical output part of an optical element,

wherein optical switching is performed by applying signal light and control light to the organic film, the wavelengths of the signal light and the control light being set in a region in the vicinity of resonance on the longer wavelength side in the absorption spectrum of the organic film; and by changing a real part or real and imaginary parts of the refractive index of the light control part by using the control light, to thereby cause a phase difference in the signal light.

23. An optical switching process comprising:

applying signal light and control light to an organic film formed on a substrate as a light control part, the wavelengths of the signal light and the control light being set in a region in the vicinity of resonance on the longer wavelength side in the absorption spectrum of the organic film,

wherein optical switching is performed by changing a real part or real and imaginary parts of the refractive index of the light control part by using the control light, to thereby cause a phase difference in the signal light.